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ABSTRACT

Described in this paper is a project utilizing the linkage concept in the implementation of a diffused team planning process in six elementary schools undergoing desegregation. Strategies employed in designing the project are reviewed. These reviews include a retrospective analysis of the first two years of the project, a review of the minutes of the team planning sessions, and a review of literature on diffusion. The implementation of the Linkage Model is described in terms of the following: (1) the role of the diffusion manager or "linking agent" in helping the participating schools develop systematic problem solving processes within the planning teams and to help link the teams to existing resources within the school system; (2) the concept of the mini-project for dealing with a specific classroom need; (3) a training system for helping each planning team develop, implement, and evaluate a mini-project; and (4) the role of the diffusion task force in solving immediate problems, especially the resources to be allocated to the project. A conclusion summarizes the impact the project had on such factors as student achievement, the sharing of ideas among faculty, personal teaching satisfaction, responses to student attitude, conflict in the school, school morale, and resources or interference from the central office. An argument is made for the potential impact such a project might have if carried out over an extended period of time. (EB)

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DIFFUSING INNOVATION IN AN URBAN SETTING:

AN EVALUATOR'S PERSPECTIVE

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Conceptualization Stage

Our activity in a project to diffuse a particular innovation, the team planning process began in the Spring of 1975 and lasted approximately two and one half years. Our first task was to do a retrospective analysis of the first two years of the project as it had functioned in two elementary schools. Based upon that analysis and a survey of the diffusion literature we were to identify which aspects of the pilot work in the two schools could be diffused and recommend practical methods and mechanisms for diffusing them to other schools. Our recommendations were, of course, to be in keeping with the spirit of the funding proposal.

The local foundation, in supplying the funds had taken care not to push an innovation the local school system didn't want. They used a dwindling funding device in which they supported initial work to define and develop the innovation, followed by support for diffusing the innovation. This meant that the team planning process after it was initially developed, had to be supported by funds from the school system, not the Foundation. This funding device helped to assure that the innovation would be an educational reality rather than merely an administrative device for siphoning foundation funds into the system.

Our first task, then, was to do a retrospective analysis of two years work in two pilot schools to try to find what had been done there, aided by developmental funds, which could be done elsewhere without extramural financial support. Our task was made even more difficult by the fact that the innovation, the team planning process, is not a thing but a complex process. The process is based upon the assumption, belief or

hope that teachers can work together to solve problems they can't solve individually or as a collection of individuals. If educational experiences are not what they should be then teachers are a part of the problem and must be a part of the solution. The assumption is reasonable but the diffusion task and its evaluation are difficult. It's not a matter of developing a learning package and shipping it out for teachers to use after a brief training period. It's a matter of changing from go-it alone to team planning -- a change of process and decision making procedures at the two pilot schools.

A review of the minutes of team planning sessions at the two pilot schools enabled us to determine issues and problems the teachers had addressed as they attempted to evolve team planning processes. Coupled with results of personal interviews with those involved, the minutes enabled us to note differences in planning efforts between the two pilot schools and to note similarities among the problems encountered and the solutions attempted.

Major problems, not surprisingly, revolved around defining new roles. Who was to be responsible for what? From whom would leadership and direction come? Who would decide what goals would be worked toward? Who would say how things were to be done? Who would decide from among the competing suggestions? These problems overlapped with questions about what resources were available and how the resources would be allocated.

There seemed to be a consensus on two conclusions:

1. The process of planning team development was often frustrating to those involved but, at the same time, they preferred the "new" frustrations to the "old" ones.

2. The greatest satisfaction came when problems were clarified so that teachers could work together to solve small problems perceived to be relevant to general goals.

Our second task was to review the literature on diffusion and make recommendations for diffusing the team planning process. This task brought us to a role confusion of our own. The group responsible for receiving our recommendations and deciding what to do with them (eg. accept some, reject some) was a diffusion task force. Nevertheless, when we continued in our role as evaluators we would be evaluating activities which were influenced by our own input. In one sense, we were evaluating the quality of our own recommendations compromising our role as outside evaluators. This was in keeping with a belief that evaluators' recommendations and/or data should be made reactive ie. become a part of the guidance or management, become formative rather than merely summative.

We didn't attempt to preserve the awkward, outside evaluator role. Working to make evaluation formative brings the evaluator into closer involvement, some of which becomes quite personal as one likes or dislikes individuals or policies or aims of the project. Making conceptual and strategy recommendations as we were to do in our second task brought us from outside evaluator role to one which is closer to the anthropologists' notion of participant observer. In any event, we clearly had at least one foot in the door and were faced with the problem of keeping it firmly grounded rather than in our mouth.

The diffusion literature did not contain an easy way out of our role confusion but we decided that Havelock's "Linkage Model" would be a good starting point for helping to clarify other roles in developing planning teams and diffusing the team planning process. The linkages referred to by the model are between a Resource System and a User System (eg. a

diffusion group as resource linked to an evolving planning team as user). The linkages themselves are in the form of inputs and feedbacks. The linking inputs and feedbacks are connected to the problem solving cycles of the User System and the Resource System. A planning team functions as a problem solving team and what they get from a Resource System is inputs to their problem solving cycle: They don't get solutions or "do-this" commands; they get resources.

We were quite pleased by the flexibility and elegant simplicity of the Linkage Model and its potential for creative extension and application to major problems of the diffusion project:

1. What is to be diffused? (Answer - Planning teams with internalized problem solving cycles which are linked to resources in such a way that real educational problems get solved.)

2. How is it to be diffused? (Answer - Potential planning teams are to be identified, problem solving cycles established and links forged.)

3. What is the role of the planning team? (Answer - To internalize problem solving processes, get resources, not directives, from wherever they can, and solve problems.)

4. What is the role of central project staff? (Answer - To establish their own problem solving cycle such that they can model and train users in problem solving, facilitate internalization of problem solving cycles and the forging of links between and among increasing numbers of users.)

5. What resources are available? (Answer - the expertise of the central staff plus whatever else can be found)

Implementation Stage

The diffusion implementation stage began in 1976-77 and continues beyond this date. During the period, 1976-78, the "linkage" concept was tested through the diffusion of the team planning process into six elementary schools. The six schools provided a formidable challenge for

the successful implementation of the innovation (team planning) and the diffusion model (linkage concept) for several reasons:

1. The entire school system was faced with twin traumas -- an increasingly bleak financial picture and a slowly developing desegregation plan promising very serious dislocations of teachers and students.

2. Pre-test interviews of principals and faculty at the six schools chosen to receive the innovation showed general low teacher morale. In addition, faculty votes in regard to participation in project activities revealed a clear split between those teachers who viewed innovation and change positively and those who opposed it.

3. As the teachers had a limited exposure to shared decision making and little opportunity to work in team planning, the innovation was foreign to their experience and the normal school culture. Principals also faced the prospect of working in unfamiliar territory.

4. With team planning being a highly complex and judgemental process, it could not be implemented in the six schools in an algorithmic fashion. Yet, our retrospective analysis at the two original pilot schools, indicated that more direction and structure was needed; more attention would have to be devoted to training planning teams.

With full awareness of the difficulties implied by the complexity of the diffusion task, a series of decisions were made which proved to be key elements in the diffusion stage of the project. First, a diffusion manager was employed and trained as a "linking agent" between central office (Resource system) and project schools (User system). Specifically, her role was to help the participating schools develop systematic problem solving processes within the planning teams and to help link the teams to existing resources within the school system: curriculum experts, special money sources, teaching devices, effective practices discovered elsewhere, etc.

Second, the concept of the mini-project because of its micro-system focus, was brought into being as the expected product of team planning. Mini-projects were to be designed to meet a specific classroom need, most

appropriately to involve a small number of students. Mini-project development permitted planning teams to complete a problem solving cycle -- problem definition, selecting program options, implementation and evaluation, in a relatively short period of time, thus providing participants with maximum knowledge of results and success.

Third, a training system encompassing both a product dimension (developing mini-projects) and a process dimension (building team solidarity) was designed. Each new planning team in the six diffusion schools was trained to develop, implement and evaluate a mini-project created by the group. In addition, assistance was provided, through the diffusion manager, to assist each team to monitor team building progress. Finally, the diffusion manager in her role as "linkage agent" brought human and material resources from the central office to each planning team.

Fourth, the diffusion task force accepted the responsibility for overall diffusion direction. It was hoped that this task force would solve immediate problems, especially the resources to be allocated to the project. It would also confront the difficult long range need to organize elementary schools to support a team planning model of decision-making.

Conclusions

The concept of "linkage" proved to be a useful one for diffusion of a complex, process-oriented, judgemental innovation. The diffusion manager functioned in a way which evidenced the efficacy of the model. From interviews with all participants she was credited with "providing guidance, a sense of direction, developing leadership concepts, clarifying

issues and providing materials and consultant personnel."* All forty-three persons interviewed had positive things to say about her. There were, in fact only four isolated comments we could classify as negative.

The diffusion task force's performance, on the other hand, was mixed. Immediate problems were confronted and solved. Long range problems were avoided. In part, this can be attributed to role confusion. The project was managed by the Division of Research and Development. A number of task force members came from other departments and owed allegiance to different leaders. Significantly, the assistant superintendents who could have played a salutary role in long range planning, absented themselves from task force activity, thereby increasing a feeling of powerlessness and isolation. Furthermore, the environmental effects of budget constriction and desegregation dislocations were significant factors in limiting task force action. In effect, then, the linkage concept so carefully built into the task force role was only partially successful.

All planning teams were trained; they each developed and implemented a mini-project. Training in the team planning process facilitated team development and contributed to the design of mini-projects. Observation of planning team sessions and analysis of minutes and other data indicate that planning teams improved considerably in the way they functioned as the planning time progressed.

The mini-projects were well designed for first efforts; evaluations showed an overall pattern of successfully attained objectives. There were failures to attain some objectives in particular mini-projects but no overall failures.

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*It must also be said that the success of this aspect of the project was attributable to the enthusiasm, tact, dedication and resourcefulness of the particular person chosen as diffusion manager.

It is instructive to examine project success as evidenced by all the project specific evidence -- interviews, mini-projects, planning team observations, minutes, etc. The project specific information was uniformly positive in tone and substance; interviews with the identical persons who were pre-tested showed dramatic changes in teachers' attitudes toward the project and its goals. Table 1 shows the specific results.

The three items in Table 1 which show the greatest shift toward the positive are Student Achievement, Sharing of Ideas Among Faculty and Personal Teaching Satisfaction. Responses to Student Attitude, Conflict in the School and School Morale remained approximately the same. The seventh item, Resources or Interference from Central Office showed a small change toward more negative responses, possibly in keeping with a healthy growth in assertiveness on the part of planning team members. Nevertheless, responses to the item were positive by a ratio of 29 to 12 in November and by 25 to 16 in May.

It is worth noting that the data in Table 1 lend credibility to a conclusion that the May interviews were obtaining data based upon actual perceptions rather than a generalized set for feeding positive information to evaluators. The three items focused most directly on Project activities also showed the most positive shifts. Furthermore, a set to feed positive information to the authorities would not account for the increased negatives in response to Resources or Interference from the Central Office. The increased positives in Student Achievement, Sharing of Ideas Among Faculty and Personal Teaching Satisfaction and the slight tendency to increased positives in Student Attitude and School Morale suggested that the project is perceived as having important

Characteristic	Pre-Project November, 1976		Post Project May, 1977	
	Negative Responses	Positive Responses	Negative Responses	Positive Responses
Student Achievement	20	21	8	33
Student Attitude	15	26	14	27
Sharing of Ideas Among Faculty	20	21	12	29
Resources or Interference from Central Office	12	29	16	25
Conflict in the School	27	14	29	12
School Morale	18	23	16	25
Personal Teaching Satisfaction	24	17	8	33

TABLE 1. HOW TEACHERS AND PRINCIPALS AT THE SIX DIFFUSION SCHOOLS FELT ABOUT THEIR SCHOOLS BEFORE AND AFTER THE P.E.E.C.C. PROJECT.

positive effects on matters close at hand and, perhaps is just beginning to affect more global items of concern.

The belief that positive changes in school climate accrued from project activity is not consistent with results from the Purdue Opinionaire. The changes, from pre-testing to post-testing with the Opinionaire were small; more often than not, the small changes were negative. Thus, the data from the two sources appear to conflict. One interpretation of the results is that this project treatment was insufficient in effect to make a difference compared to the many negative factors which bear on large, urban school systems. A second interpretation, and one we choose to support is that there has been insufficient time for the project to accumulate power. We believe that the data indicate a strong beginning, and continued project activity would result in greater impact on more general issues in the future.

Implications

What generalized implications can we extract from the various conclusions related to the diffusion project at the six elementary schools?

1. The linkage concept in the form of a "linkage agent" (in our case, the diffusion manager) can be helpful in communicating with both Resource and User systems. The linking agent must be capable, credible and well educated in the innovation to be diffused.

2. In large school systems, the implementation and management of innovation should be divorced from its development and evaluation. Specifically, in our project, the Division of Research and Development generated the grant which supported the project, managed its implementation, was responsible for its diffusion throughout the system and evaluated its effectiveness. In large part, the role confusion of individuals within the diffusion task force was a product of the role confusion between departments of the school system.

3. Evaluators of complex, process-oriented innovations cannot divorce themselves from the development phase of the project. Although our role as diffusion evaluators became symbiotic in regard to the project, we did not feel unhappy about it. We notice that Michael Scriven has created the concept of <u>responsive evaluation</u> to legitimize the developmental tasks that we engaged in as a result of formative evaluation data that we, ourselves generated.

4. The concept of the mini-project is an exciting one for other educational agencies to consider. The problem-areas noted in the first set of mini-projects were the difficulties encountered by the teachers in narrowing their focus toward a true micro-system and their lack of experience in designing criterion-referenced assessment procedures.

5. Team planning is also a worthy innovation to be diffused throughout a school system. Such a system could be composed of three categories of schools:

   a. "startup" schools in their first year of experience with team planning where only a portion of the teachers actually participate

   b. "transitional" schools which have had at least one year of experience with team planning and are extending the process to other teachers

c. "team planning" schools in which all teachers and the principal elect to participate in a fully functioning team planning environment

6. We cannot see how the last stage of diffusion -- internalization can be accomplished in the normal organizational and administrative structure of elementary schools. If team planning is to become a reality, then drastic changes must be made in the school culture and the "way things are done."

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